

REMARKS

This Application has been carefully reviewed in light of the Final Office Action mailed July 21, 2004 and Advisory Action Dated November 24, 2004. At the time of the Final Office Action, Claims 1-28 were pending in this patent application. The Examiner rejected Claims 1-28. Of these, Claims 1, 12, 20 and 25 are independent. While, the Applicants filed an Amendment After Final (mailed October 21, 2004), the Amendment After Final has not and should not be entered. By this Amendment, Applicants have amended Claims 1, 12, 20 and 25 and have cancelled Claims 2, 3 and 27. Applicants have added new dependent Claims 29-31. Thus, Claims 1, 4-26 and 28-31 are presently pending. Because three dependent claims are cancelled and three dependent claims are added by this amendment, the same number of claims are currently pending in this application after entry of Claims 29-31. As a result, no fee is due for the entry and consideration of Claims 29-31. Applicants respectfully request reconsideration and favorable action in this case.

35 U.S.C. §103 REJECTIONS

Claim 1 stands rejected under 35 USC 103(a) over Miskimins et al. (U.S. Pat. No. 6,230,109) ("Miskimins"). Claims 2-28 stand rejected under 35 USC 103(a) over Miskimins in view of Mavretic (U.S. Pat. No. 6,230,109) ("Mavretic"). Applicants respectfully traverse this rejection, and the assertions and determinations therein, for at least the following reasons.

Amended Claim 1 recites, in part, "a linking device that enables a controller to communicate with the plurality of smart field devices, the linking device being further operable to automatically detect a communications problem associated with the protocol bus while the protocol bus is substantially active, and wherein the linking device has a wiring fault detection unit and a wiring fault detection unit residing therein" and "the wiring fault detection unit being adapted to be coupled to the protocol bus to measure an electrical characteristic associated with the protocol bus while the protocol bus is substantially active". Neither Miskimins nor Mavretic teaches or suggests every element of amended Claim 1. Neither Miskimins nor Mavretic teach or suggest automatically detecting a communications problem "while the protocol bus is substantially active", "a linking device", "smart field devices" or a "wiring fault detection unit" within the linking device.

Miskimins appears to assume that the cable is disconnected from normal use and then connected to Miskimins' testing device, either directly or via an adapter. See Miskimins, FIGURES 1 and 2; col. 6, lines 9 – 20; col. 8, lines 35-50. Thus, Miskimins appears to teach directly away from testing "while the protocol bus is substantially active", and, as admitted by the Examiner at page 3, paragraph 3 of the Final Office Action, does not teach or suggest smart field devices.

Mavretic generally involves measuring electrical characteristics between a power source and a load at a set of harmonic frequencies to determine information about the load. Mavretic, col. 2, lines 19-25. The information gained from these measurements is primarily used to control an impedance matching network. Mavretic, col. 2, lines 35-39. Mavretic is in no way involved in detecting "a communications problem associated with the protocol bus while the protocol bus is substantially active" as Mavretic involves only basic electrical characteristics, such as current, voltage and phase. Mavretic, col. 1, lines 8-14. Further, as Mavretic does not involve communications problems, Mavretic involves no teaching or suggestion with respect to detecting a communications problem associated with the protocol bus "while the protocol bus is substantially active".

Further, the Examiner argues in a conclusory fashion that "a power source and a load and a first circuit that detects a set of electrical characteristics and a second circuit to receive the set of electrical characteristics" teaches "smart field devices". Office Action, p. 3, paragraph 3; p. 9; p. 10-11. The Examiner has provided no reasoning, either in the Examiner's original rejection, the Advisory Action, or in the Examiner's discussion of Applicants' previous arguments, as to the relationship between power sources, loads and detecting electrical characteristics, and a "smart field device". Typically, "smart field devices" involve some intelligence or processing capability, for example, Applicants have described smart field devices, in at least one embodiment, as "microprocessor-based devices such as sensors, actuators, etc. that, in some cases, such as with Fieldbus devices, also perform some control loop functions traditionally executed by a DCS controller" and the Examiner has provided absolutely no reasoning or connection between the cited portions of Mavretic and Applicants' claimed "smart field devices". Applicants' Specification, pages 1-2. Similarly, the Examiner has made no showing of any kind of connection between a "linking device" as claimed by Applicants and Examiner's cite to a power source, a

load and electrical characteristics other than to make a mere conclusory statement that a power source, a load and electrical characteristics teach a “linking device”. For example, in one embodiment, a linking device may provide a communication gateway between groups of smart field devices. See Applicants’ specification, p. 2, line 20 – p. 3, line 2. Mavretic does not even remotely address communication gateways. Applicants respectfully request that the Examiner provide some reasoning or argument for the Examiner’s position.

Further, in both the Final Office Action and the Advisory Action, the Examiner has failed to respond to Applicants’ previous arguments with respect to Mavretic and smart field devices, other than to cut and paste language from the original Office Action (see p. 3, paragraph 3 of the January 30, 2004, Office Action) and place the identical pasted language under a “Response to Arguments” section in the current Office Action (see Final Office Action, p. 10-11 with respect to Claim 2) and to state that Applicants’ arguments are not persuasive (see Advisory Action, continuation of 5). Applicants again respectfully request that the Examiner respond to Applicants’ arguments and provide some reasoning as to how Mavretic and/or Miskimins, either alone or in combination, apply to Applicants’ arguments with respect to a “linking device” and “smart field devices”.

Thus, neither Mavretic or Miskimins, either alone or in combination, teach or suggest every element of amended Claim 1. Therefore, amended Claim 1 is patentable over the cited references and Applicants respectfully request allowance of amended Claim 1.

Independent Claims 12, 20 and 25 are patentable over Miskimins and Mavretic for at least reasons analogous to those presented above in association with Claims 1. Therefore, Applicants respectfully request allowance of independent Claims 12, 20 and 25.

Dependent Claims 4-11 and 29 depend from independent Claim 1, dependent Claims 13-19 and 30 depend from independent Claim 12, dependent Claims 21-24 and 31 depend from independent Claim 20, and dependent Claims 26 and 28 depend from independent Claim 25. Independent Claims 1, 12, 20 and 25 have been shown above to be allowable. Thus, dependent Claims 4-11, 13-19, 21-24, 26 and 28-31 are

patentable as depending from an allowable base claim and as including further distinctions over the cited reference. Therefore, Applicants respectfully request allowance of dependent Claims 4-11, 13-19, 21-24, 26 and 28-31.

Conclusion

Applicants have now made an earnest attempt to place this case in condition for immediate allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request reconsideration and allowance of Claims 1, 4-26 and 28-31.

Although Applicants believe that no other fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 13-2855 of Marshall, Gerstein & Borun. In addition, if a petition for an extension of time under 37 CFR 1.136(a) is necessary to maintain the pendency of this case and is not otherwise requested in this case, Applicants request that the Commissioner consider this paper to be a request for an appropriate extension of time and hereby authorize the Commissioner to charge the fee as set forth in 37 CFR 1.17(a) corresponding to the needed extension of time to Deposit Account No. 13-2855 of Marshall, Gerstein & Borun.

If there are matters that can be discussed by telephone to further the prosecution of this application, Applicants respectfully request that the Examiner call its attorney at the number listed below.

December 21, 2004

Respectfully submitted for,

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